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LR-N14-0162



U.S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, DC 20555-0001

Salem Generating Station Unit 2

Renewed Facility Operating License No. DPR-75

NRC Docket No. 50-311

Subject:

Submittal of Relief Request Associated with the Third Ten-Year Inservice

Inspection (ISI) Interval

In accordance with 10 CFR 50.55a, "codes and standards," paragraph (g)(5)(iii), PSEG Nuclear LLC (PSEG) hereby requests NRC approval of the attached request for the third 10-year ISI interval for Salem Generating Station Unit 2, which ended on November 27, 2013. This request addresses examination limitations for exams performed in accordance with the requirements of American Society of Mechanical Engineering (ASME) Boiler and Pressure Vessel Code, Section XI for Class 1 and 2 components.

There are no regulatory commitments contained within this letter.

Should you have any questions concerning this matter, please contact Mr. Brian Thomas at 856-339-2022.

Sincerely,

Paul R. Duke, Jr. Manager - Licensing

PSEG Nuclear LLC

Enclosure: 10 CFR 50.55a Relief Request S2-l3R-132

cc: W. Dean, Administrator, Region I, NRC NRC Senior Resident Inspector, Salem

J. Lamb, Project Manager, Salem, USNRC

P. Mulligan, Manager IV, NJBNE (w/o attachment)

L. Marabella, Corporate Commitment Tracking Coordinator (w/o attachment)

T. Cachaza, Salem Commitment Tracking Coordinator (w/o attachment)

# LR-N14-0162

# Enclosure 1

10 CFR 50.55a Relief Request S2-I3R-132

# Salem Nuclear Generating Station, Unit 2 Renewed Facility Operating License No. DPR-75

NRC Docket No. 50-311

10 CFR 50.55a Relief Request Number S2-I3R-132

Relief Request in Accordance with 10 CFR 50.55a(g)(5)(iii) Inservice Inspection Impracticality

#### NOTE:

Salem Unit 2 – Third Ten-Year Interval Inservice Inspection (ISI) examinations were conducted between November 27, 2003 (start) and November 27, 2013 (end). There were six refueling outages performed during this time frame that included RFO-14 through RFO-19.

#### 1. **ASME Code Components Affected**

Code Class

1 and 2

Reference:

IWB-2500. IWC-2500

Code Case N-578-1 Table -2500

Code Case N-460

Examination Categories: B-B, C-A, C-B, R-A

Item Numbers:

See Table 1

Description:

See Table 1

Component Number:

See Table 1

#### 2. **Applicable Code Edition and Addenda**

The code of record for the Salem Unit 2 Third Ten-Year ISI Program Interval is American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," 1998 Edition through the 2000 Addenda, herein after referred to as the Code.

During the Third Interval, PSEG implemented a Risk-Informed Inservice Inspection (RISI) program based on Electric Power Research Institute (EPRI) Topical Report TR-112657, Rev. B-A and Code Case N-578-1, "Risk-Informed Requirements for Class 1, 2, or 3 Piping, Method B," as

specified by TR-112657. The RISI program was approved by the NRC via Reference 1.

# 3. Applicable Code Requirement

For welds, other than those in the RISI program, the required examination volume is specified in figures that are referenced by the Examination Category and Item Number in Table IWB-2500-1 for Class 1 and Table IWC-2500-1 for Class 2 of the Code.

For welds that are within the RISI program, the required examination volume is specified in Section 4 of EPRI TR-112657 (Reference 4) specific to the degradation mechanism.

Additionally, PSEG has implemented ASME Section XI Code Case N-460, "Alternative Examination Coverage for Class 1 and Class 2 welds, Section XI Division 1." Code Case N-460 states in part, "when the entire examination volume or area cannot be examined due to interference by another component or part geometry, a reduction in examination coverage on any Class 1 or Class 2 weld may be accepted provided the reduction in coverage for that weld is less than 10%." ASME Code Case N-460 is approved for use by the NRC in Regulatory Guide (RG) 1.147, Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1, and in EPRI TR-112657 for use with welds in the RISI program.

The examination categories for this relief request are B-B, C-A, C-B, and R-A. The applicable requirements are as follows:

A. Examination Category B-B, Pressure Retaining Welds Other Than Reactor Vessels-Inspection Program B

Code Requirement: Item Number B2.11 applies to the Pressurizer Shell to Head Circumferential weld and requires essentially 100% volumetric examination of weld length as defined by Table IWB-2500-1 and Figure IWB-2500-1.

B. Examination Category C-A, Pressure Retaining Welds in Pressure Vessels

Code Requirement: Item Number C1.20 includes head circumferential welds and requires essentially 100% volumetric examination as defined by Figure IWC-2500-1.

C. Examination Category C-B, Pressure Retaining Nozzle Welds in Vessels

Code Requirement: Item Number C2.21 applies to nozzle-to-shell or nozzle to head welds and requires both surface and volumetric examinations. The requirements are defined by Figure IWC-2500-4(b) and include only those piping runs selected for examination under Examination Category C-F.

- D. Examination Category R-A, Risk Informed Piping Examinations
   EPRI TR-112657. Rev B-A. Requirements:
  - For piping welds less than NPS 4 with a degradation mechanism of thermal fatigue (N-578-1, Item Number R1.11), the examination volume is defined in Figure 4-1.
  - For piping welds NPS 4 or larger with a degradation mechanism of thermal fatigue (N-578-1, Item Number R1.11), the examination volume is defined in Figure 4-2.
  - For piping welds NPS 4 or larger with a degradation mechanism of Intergranular Stress Corrosion Cracking (IGSCC) (N-578-1, Item Number R1.16), the examination volume is defined in Figure 4-11.

#### 4. Basis for Relief:

Pursuant to 10 CFR 50.55a(g)(5)(iii), relief is requested from examining essentially 100% (>90%) of the volume or surface required by the Code for welds other than those in the RISI program, and from examining essentially 100% (> 90%) of the alternative volumes required by EPRI TR-112657 for welds in the RISI program. Table 1 identifies the specific examinations that do not meet the examination requirements described in this relief request including a description of the limitation. Attachment A provides additional descriptive details (data reports, sketches, illustrations, and/or drawings) for these components. The welds and examination areas subject of this request have been examined to the "extent practical" within the limitations of design, geometry and materials of construction. The welds were volumetrically examined by radiography and/or surface examination during fabrication, in accordance with applicable construction/fabrication codes providing adequate assurance for their structural integrity prior to plant operation. In addition, the components, identified in Table 1, are visually examined for leakage in accordance with the Code during each refuel outage for Class 1 and once during each period for Class 2.

A. Examination Category B-B, Pressure Retaining Welds in Vessels Other Than Reactor Vessels - Inspection Program B

Table 1 identifies specific information, description of limitation, and figures from the examination report with an explanation of the limitation(s) encountered.

#### Basis for Relief:

The Pressurizer Shell to Upper head weld (Examination Category B-B, Item Number B2.11) described in Table 1 was examined to the extent practical in accordance with ASME Section V, Article 4 using the required Supplements of ASME Section XI, Appendix I as defined in Table I-2000-1 of the Code.

Impracticality Compliance: Obtaining volumetric Code required coverage for weld 2-PZR-CIRC-DUH is impractical due to portions of the weld being obscured at numerous locations around the Pressurizer by the permanently installed support ring and three weld pads.

<u>Burden Caused by Compliance:</u> To increase volumetric examination coverage, the insulation support ring would require a design modification.

<u>Proposed Alternative and Basis for Use:</u> No alternative provisions are practical for the subject component. Examinations were performed to the maximum extent practical with no recordable indications.

The subject components have been subjected to visual leakage examinations each refueling outage. This provides additional assurance that the structural integrity of the subject components is maintained.

B. Examination Category C-A, Pressure Retaining Welds in Pressure Vessels

Table 1 identifies specific information, description of limitation, and figure from the examination reports with an explanation of the limitation(s) encountered.

#### Basis for Relief:

The two Examination Category C-A welds described in table 1 were examined to the extent practical in accordance with ASME Section

XI, Appendix III using the required Supplements of Appendix I, as defined in Table I-2000-1 of the Code.

Impracticality Compliance: Obtaining Code required coverage for welds 2-CVCT-2 and 2-BIT-A is impractical due to portions of each weld being obscured by support legs that are welded to the vessel shell. The 2-BIT-A required coverage is also impacted by two thermowells.

<u>Burden Caused by Compliance:</u> To increase examination coverage, the support connections for the two vessels would require a design modification.

<u>Proposed Alternative and Basis for Use:</u> No alternative provisions are practical for the subject component. Examinations were performed to the maximum extent practical with no rejectable indications.

The subject components have been subjected to periodic visual leakage examinations. This provides additional assurance that the structural integrity of the subject components is maintained.

C. Examination Category C-B, Pressure Retaining Nozzle Welds in Vessels

Table 1 identifies specific information, description of limitation, and figures from the examination report with an explanation of the limitation(s) encountered.

### Basis for Relief:

Impracticality Compliance: The 2-BIT-2 nozzle-to-vessel weld was volumetrically examined to the extent practical in accordance with ASME Section V, Article 4 using the required Supplements of ASME Section XI, Appendix I as defined in Table I-2000-1 of the Code. Obtaining Code required volumetric coverage is impractical for weld 2-BIT-2 due to weld crown and nozzle configuration.

<u>Burden Caused by Compliance:</u> To increase volumetric examination coverage, the head-to-nozzle configuration would require an altered configuration and the weld crown reduction.

<u>Proposed Alternative and Basis for Use:</u> No alternative provisions are practical for the subject component. Examinations were performed to the maximum extent practical with no recordable indications.

The subject components have been subjected to periodic visual leakage examinations. This provides additional assurance that the structural integrity of the subject component is maintained.

The 2-BIT-2 nozzle-to-vessel weld also required a magnetic particle examination and was examined in accordance with ASME Section V, article 7. The examination achieved 100% coverage with acceptable exam results.

## D. Examination Category R-A Risk Informed Piping Examinations

Table 1 identifies specific component information, description of limitation, and a figure for the examination report with an explanation of the limitation(s) encountered.

#### Basis for Relief:

PSEG has implemented Appendix VIII, "Performance Demonstration for Ultrasonic Examination Systems," of the ASME Code, Section XI, 1998 Edition with the 2000 Addenda in accordance with the schedule specified in 10 CFR 50.55a(g)(6)(ii)(C)(1). With the implementation of Appendix VIII, volumes that cannot be examined within the limits of qualification are considered not examined. The achieved coverage provided in Table 1 is based on the volume examined by Appendix VIII qualified techniques.

<u>Impracticality Compliance:</u> Obtaining Code required coverage is impractical for five Category R-A welds listed in Table 1 due to component configurations and/or acoustical material properties.

<u>Burden Caused by Compliance:</u> To increase volumetric examination coverage would require design modification and the design, fabrication and installation of special fittings.

Proposed Alternative and Basis for Use: Examinations on the R-A welds were performed to the maximum extent practical with no rejectable indications. Typically when R-A weld examination limitations are identified as part of the RISI implementation a weld examination substitution is selected and scheduled as applicable. During the implementation of the Third ISI interval there were twenty one weld examinations that were identified as limited examinations. Of these twenty one welds only five of these welds were not successfully substituted with additional welds and now require relief.

During the development of the Salem Unit 2 Fourth ISI interval RISI program, these five limited R-A weld examinations have been substituted. However the living RISI program periodic updates may cause new piping weld selections not previously examined to be selected. In these new situations, Salem intends to prioritize examination coverage during the selection of these examination locations.

The five R-A welds listed in Table 1 were found to have weld examination limitations with no suitable weld substitution examination successfully performed without additional limitations. These five limited weld examinations fall into three different R-A groups.

The first group of welds are in the Chemical and Volume Control system and the group includes a total of five class 1 welds with R-A item No. R1.11 and are Risk Category 2 requiring 25% examination sample (1.25 welds). Of the five welds, two were originally selected but both were found during examination to be limited, one additional weld was added as a substitution weld although this weld examination also resulted in examination limitations. Of the two remaining non selected welds in this weld group, both have been selected for examination during the Fourth ISI interval and are not expected to have limited examination coverage.

The second group of welds are in the Safety Injection system and include a total of two class 1 welds with R-A item No. R1.11 and are Risk Category 5 requiring 10% examination sample (0.2 welds). The one weld selected for examination in the Third ISI interval resulted in 0% coverage. This examination was scheduled during the last outage of the Third ISI interval and a suitable substitution weld was not able to be scheduled. The only remaining weld in this group is currently selected in the first outage of the Fourth ISI interval to substitute this weld.

The third group of welds are in the Safety Injection system and includes a total of twenty three class 1 welds with R-A item No. R1.16 and are Risk Category 5 requiring 10% examination sample (2.3 welds). Three welds were selected for examination and two of the three examinations resulted in 50% weld examination coverage. Two additional weld examination substitutions have been selected and are scheduled for examination during the Fourth ISI interval and are not expected to have limited examination coverage.

The subject class 1 components have been subjected to visual leakage examinations after the completion of each refueling outage. This provides additional assurance that the structural integrity of the subject components was maintained.

Summary of Third Interval Class 1 and 2 piping welds included in the overall RISI program.

R-A Class 1 elements (welds) = 1387 R-A Class 2 elements (welds) = 1628 Total R-A Class 1 and 2 elements (welds) = 3015

Required R-A Class 1 examinations = 118
Required R-A Class 2 examinations = 52
Total required R-A examinations = 170
Total R-A weld examinations performed = 202

R-A weld summary is included in table 2

### 5. Duration of Proposed Alternative

This relief is applicable to the Third Ten-Year Inspection Interval for Salem Unit 2 Generating Station, which ended on November 27, 2013.

### 6. Precedents

As part of the submission of the Salem 2 Second 10-year interval ISI program plan, associated relief requests were submitted with the exception of Examination Category R-A, which was not implemented until the Second Interval, Third Period, Second Outage (RFO-13). Relief was granted for Salem 2 Second 10-year interval for Category B-B component 2-PZRCIRC DUH, Category C-A components 2-CVCT-2, and 2-BIT-A, and Category C-B component 2-BIT-2 (References 2 and 3).

#### 7. References

- "Salem Nuclear Generating Station, Unit No. 2, Extension of Risk-Informed Inservice Inspection Applicability (TAC No. MC3854)," dated April 1, 2005
- 2. "Evaluation of the Second Ten-Year Interval Inspection Program Plan and Associated Requests for Relief for Salem Generating Station, Unit 2 (TAC No. M83316)," dated October 23, 1995.

- 3. "Salem Nuclear Generating Station, Unit No. 2 Evaluation of Relief Requests S2-I2-RR-B01 and S2-I2-RR-C01 (TAC Nos. MD5977 and MD5978)," dated June 2, 2008.
- 4. EPRI TR-112657, Revised Risk-Informed Inservice Inspection Evaluation Procedure, Revision B-A
- 5. American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components", 1998 Edition through the 2000 Addenda

#### Table 1

#### Salem 2 Nuclear Generating Station

#### Relief Request# S2-I3R-132

#### Third Interval Inservice Inspection Examination Limitations

Sum#	Component ID	Description	Material	Exam Cat.	Exam Item No.			Examination Requirements / Fig No.	Code Coverage Achieved	Exam Outage	Att. A Figure
010900	2-PZR-CIRC DUH	SHELL D TO UPPER HEAD (PRZ)	Carbon Steel with Stainless Steel Cladding	В-В	B2.11	1	UT	IWB-2500-1	62.5%	RFO-18	A-1

Axial scans were performed using a 45° and 60° shear wave. Circumferential scans were performed using a 45° and 60° shear wave. A 0° longitudinal wave exam was also performed. The 45° axial scan obtained 58.76% and the 60° axial scan obtained 47.84% of required coverage. The 45° circumferential scans obtained 68.64% and the 60° circumferential scans obtained 68.64% of required coverage. The 0° longitudinal wave obtained 68.54% of required coverage. The combined total coverage for all scans achieved 62.5% of the required coverage. The total weld length is 290". Examination was limited due to the following: Limitation 1 was of 168.5" of weld length that the volume of coverage was effected by a permanently installed insulation support ring; Limitation 2 was an area of 13" of weld length that the volume of coverage was effected by additional permanently installed insulation 4 was an area of 7" of weld length that the volume of coverage was effected by additional permanently installed insulation support.

275030	2-CVCT-2	SHELL TO LOWER HEAD (CVC TANK)	Shell and Head - Stainless Steel	C-A	C1.20	2	UT	IWC-2500-1	81.4%	RFO-14	A-2
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Axial scans were performed using a 45° and 60° shear wave. Circumferential scans were performed using a 45° shear wave. The 45°axial scan obtained 81.4%, and the 60° axial scan obtained 81.4% of code required coverage. The combined total coverage for all scans achieved 81.4% of the code required coverage. The total weld length is 285". A total of 53.5" was inaccessible for examination due to four welded supports that covered 13.5" of weld for each of three supports and 13" for one support. The 231.5" of weld that was accessible was scanned from both sides of the weld in both the axial and circumferential directions for full Code coverage.

- 1												
	715180	2-BIT-A	LOWER HEAD (BIT)	Carbon Steel with Stainless Steel Cladding	C-A	C1.20	2	UT	IWC-2500-1	87.0%	RFO-19	A-3

Axial scans were performed using a 45° and 60° shear wave and a 0° longitudinal wave. Circumferential scans were performed using a 45° and 60° shear wave. The 45° axial scan obtained 87% and the 60° axial scan obtained 87% of required coverage. The 45° circumferential scans obtained 87% and the 60° circumferential scans obtained 87% of required coverage. The combined total coverage for all scans achieved 87% of the required coverage. The total weld length is 165". Examination was limited due to the following: a total of 6" was inaccessible for examination due to two thermowells at 0° and 180°; and four support legs restricting an 8" area of weld at each leg location for a total of 32" of weld length.

-									····			
	-4-400		NOZZLE TO UPPER HEAD	Carbon Steel with Stainless		00.04	_				l !	
1	715160	2-BIT-2 (UPPER HD)	(DIT)	Ctani Cinddina	C-B	C2.21	2	UI	IWC-2500-4 [b]	62.5%	RFO-19	A-4
1			(BIT)	Steel Cladding			i 1				( )	

Axial scans were performed using a 45° and 60 shear wave. Circumferential scans were performed using a 45° and 60° shear wave and a 0° longitudinal wave. The 45° axial scan obtained 50% and the 60° axial scan obtained 50% of code required coverage. The 45° circumferential obtained 100% and 60° circumferential obtained 100% of code required coverage. The 0° circumferential longitudinal wave obtained 12.50% of required coverage. The combined total coverage for all scans achieved 62.5% of the required coverage. Scanning cannot be performed from the nozzle side of Weld 2-BIT-2 due to the nozzle weld configuration. Weld crown reduction on the vessel side of the weld could not be performed to improve contact as it would compromise the original outer radius or the tapered fillet portion of the weld. A code required surface MT exam was also performed at time of inspection that achieved 100% code required coverage with acceptable exam results.

#### Table 1

### Salem 2 Nuclear Generating Station

### Relief Request# \$2-I3R-132

### Third Interval Inservice Inspection Examination Limitations

Sum#	Component ID	Description	Material	Exam Cat.	Exam Item No.	ASME Class	Limited NDE Exam	Examination Requirements I Fig No.	Code Coverage Achieved	Exam Outage	Att. A Figure		
034500	3-CV-1241-13	VALVE 2CV80 TO ELBOW	Elbow Stainless Steal, Valve Stainless Steel	R-A	R1.11-2	1	UT	TR-112657 Fig. 4-1	50.0%	RFO-19	A-5		
downstrear downstrear code requir	n of required coverage n of required coverage	a 45° and 70° shear wave. Cit The 70° axial scan obtained 0 The 70° circumferential scan of weld length is 9.42". A total of	% upstream and 100% down obtained 0% upstream and 10	stream of ro	equired cove tream of req	rage. The	e 45° circumfere erage. The com	ential scan obtained Ibined total coverage	0% upstream a	and 100% achieved 50			
036200	3-CV-1231-16	VALVE 2CV78 TO PIPE	Pipe Stainless Steal, Valve Stainless Steel	R-A	R1.11-2	1	UT	TR-112657 Fig. 4-1	50.0%	RFO-19	A-6		
Axial scans were performed using a 45° and 70° shear wave. Circumferential scans were performed using a 45° and 70° shear wave. A 0° longitudinal wave exam was also performed. The 45° axial scan obtained 0% upstream and 100% downstream and 100% downstream, and the 70° axial scan obtained 0% upstream and 100% downstream of code required coverage. The 45° circumferential scan obtained 0% upstream and 100% downstream and the 70° circumferential scan obtained 0% upstream and 100% downstream of code required coverage. The 0° longitudinal wave obtained 0% upstream and 100% downstream of required coverage. The combined total coverage for all scans achieved 50% of the code required coverage due to no scanning ability from the upstream side of the weld.  Upstream side of weld is obstructed by the configuration of the valve.													
161200	10-SJ-1241-14	TEE TO PIPE	Tee Cast austenitic Stainless Steel, Piping Stainless Steel	R-A	R1.16-5	1	UT	TR-112657 Fig. 4-11	50.0%	RFO-15	A-7		
obtained 09 upstream a 100% dowr	% upstream and 100% and 100% downstream of required co	g a 45° and 60° shear wave and downstream and the 60° shear of required coverage. The 45° overage. The combined total coverage weld is obstructed due to the	wave axial scan obtained 0% circumferential scans obtaine erage for all scans achieved	% upstream d 0% upstre 50% of the	and 100% d eam and 100 code require	ownstrea % downs	am of required of stream, and the	coverage. The 60° lo	ngitudinal wav scans obtained	e obtained ( 0% upstrea	0% am and		
162450	10-SJ-1231-14	TEE TO VALVE (23SJ56)	Tee Cast austenitic Stainless Steel, Valve Cast Stainless Steel	R-A	R1.11-5	1	UT	TR-112657 Fig. 4-2	0.0%	RFO-19	A-8		
RFO-19 du	e to the configuration of	for examination during the Ris of valve 23SJ56 on the downstr 100 10-SJ-1211-16 in 4th interva	eam side of the weld and no	ability to sc									
164900	10-SJ-1211-15	TEE TO PIPE	Tee Cast austenitic Stainless Steel, Piping Stainless Steel	R-A	R1.16-5	1	UT	TR-112657 Fig. 4-11	50.0%	RFO-15	A-9		
upstream a downstrear downstrean	and 100% downstream, m of code required cov m of code required cov	y a 45° and 60° shear wave and and the 60° axial scan obtaine erage. The 45° circumferential erage. The combined total cove	d 0% upstream and 100% do scans obtained 0% upstream erage for all scans achieved 5	ownstream and 100% 50% of the o	of required conduction downstream	overage. , and the	The 60° longitude 60° circumferer	dinal wave obtained ntial scans obtained	0% upstream o% upstream a	and 100% and 100%			

the tee side of the weld. This is obstructed due to the acoustic properties of the cast stainless steel tee.

Table 2
Salem 2 Nuclear Generating Station
Relief Request S2-I3R-132

### Third Interval Inservice Inspection R-A Examination Summary

	Risk	14 N1 -	Degradation	Cl	Total		-	Total Exams	Limited	
System#	Category	Item No.	Mechanism#	Class	Welds	Required	Exams	Complete	Exams	Needed
AF	5	R1.11	TT	2	24	10%	3	5		
BF	5	R1.11	TT,TASCS	2	30	10%	3	6	1	NO
BF	6	R1.20	None	2	51	0%	0			
CS	2	R1.19	ECSCC	2	21	25%	6	6		
CS	4	R1.20	None	2	75	10%	8	8		
CS	5		IGSCC, ECSCC	2	8	10%	1	1		
CS	6	R1.20	None	2	40	0%	0			
CVC	2	R1.11	TASCS, TT	1	5	25%	2	3	3	YES
CVC	2	R1.11	TT	1	4	25%	1	1		
CVC	4	R1.20	None	1,2	98	10%	10	10		
CVC	5	R1.11	TT	1	27	10%	3	3		
CVC	5	R1.19	ECSCC	2	12	10%	2	2		
CVC	6	R1.20	None	1,2	436	0%	0			
CVC	7	R1.20	None	1	42	0%	0			
MS	6	R1.20	None	2	237	0%	0			
RC	2	R1.11	TASCS, TT	1	19	25%	5	5		
RC	2	R1.11	TT	1	3	25%	1	2	1	NO
RC	4	R1.20	None	1	234	10%	*(24)43	48	5	NO
RC	6	R1.16	IGSCC	2	6	0%	0			
RC	6	R1.19	ECSCC	2	1	0%	0			
RC	7	R1.20	None	1,2	85	0%	0			
RHR	2	R1.11	TASCS	1,2	18	25%	5	8	1	NO
RHR	2	R1.19	ECSCC	2	3	25%	1	1		
RHR	4	R1.20	None	1,2	227	10%	*(23)26	30	3	NO
RHR	5	R1.19	ECSCC	2	2	10%	1	1		
RHR	5	R1.16	IGSCC	1	8	10%	1	1		
RHR	6	R1.20	None	1,2	130	0%	0			
RHR	7	R1.20	None	2	20	0%	0			
SJ	2	R1.11	TASCS, TT	1	12	25%	3	3		
SJ	2	R1.11	TT	1	19	25%	5	6	1	NO
SJ	2	R1.19	ECSCC	1	8	25%	2	4		
SJ	4	R1.20	None	1,2	266	10%	**27	30	2	NO
SJ	5	R1.11	TT, IGSCC	1	2	10%	1	1	1	YES
SJ	5	R1.16	IGSCC	1	23	10%	3	3	2	YES
SJ	6	R1.20	None	1,2	578	0%	**0	5	1	NO
SJ	6	R1.11	TT, IGSCC	1	12	0%	0			
SJ	7	R1.20	None	1	165	0%	0		\	
SW	4	R1.20	None	2	64	10%	7	9		
TOTALS					3015		<b>17</b> 0	202	21	5

<sup>\* 22</sup> additional Class 1 Category 4 welds were selected for examination to ensure that Class 1 examinations were not significantly less than 10%.

<sup>\*\* 5</sup> class 1 welds were moved from Category 4 to 6 during Risk Informed Program Period update after examinations were complete.

#### Table 2

# Salem 2 Nuclear Generating Station Relief Request S2-I3R-132

# Acronyms defined:

AF – Auxiliary Feedwater System

BF – Steam Generator Feedwater system

CS - Containment Spray System

CC - Component Cooling System

CVC - Chemical and Volume Control System

ECSCC - External Chloride Stress Corrosion Cracking

IGSCC - Intergranular Stress Corrosion Cracking

MS - Main Steam System

PWSCC - Primary Water Stress Corrosion Cracking

RC - Reactor Coolant System

RHR - Residual Heat Removal System

SJ - Safety Injection System

SW - Service Water System

TASCS - Thermal Stratification

TT - Thermal Transients